Get a Closer Look

Terumo’s Centers of Excellence bring together clinicians interested in evaluating Terumo’s endoscopic vein harvesting products and experienced clinicians already successfully using them. The Centers facilitate the learning of techniques and procedures that can improve patient outcomes.

Based in highly reputable medical institutions, Terumo’s Centers of Excellence in Endoscopic Vein Harvesting have been established to promote collaboration and the establishment of best practices. The centers provide opportunities for clinicians evaluating the VirtuoSaph System to discuss the system and procedure with experienced surgical clinicians, observe cases, and practice the procedure on simulators.

Comprehensive training is available including advanced techniques and access to a clinical support team with more than 100 years of experience harvesting vein.

Continuing Support

Terumo supports its products and the clinicians who use them with a commitment to service before, during and after the evaluation.
**Unique Technology Worth a Closer Look**

*The VirtuoSaph™ Endoscopic Vein Harvesting System is designed to elevate standards for patient safety, conduit quality, and ergonomics. When developing the VirtuoSaph System, Terumo spent significant resources to understand the needs and wants of clinicians worldwide. The resulting design uses unique technology within an open system to ensure the effectiveness of the procedure and provide the optimal conduit.*

**What makes the technology unique?**

**A harvester rod with V-keeper, V-lock and V-cutter**

The V-cutter provides an optimal conduit through the “cutting triad” – grounding, low wattage, and branch tautness.

- Targeted, low energy during cauterizing and cutting of branches
- Quick ease and control of branch tautness

**“Open” system distal insufflation with non-occlusive trocar**

Several studies support the use of open systems and a non-occlusive trocar.1–5

- May lower the risk of CO₂ embolism
- May lower risk of intraluminal clot

**A dissector rod with an atraumatic conical tip, centering rings, and CO₂ delivered at the tip**

Centering rings allow the clinician to monitor the location of the dissector one tip relative to the vein during dissection.

**Unique wiper to clean the endoscope lens**

- One wiper activation immediately improves visibility
- Allows cleaning in the tunnel without the need for additional fluid

**Better Patient Outcomes**

The VirtuoSaph EVH System provides an endoscopic approach to saphenous vein harvesting. One small leg incision minimizes scarring, morbidity and infection associated with traditional longitudinal incisions.
Endoscope

The Terumo® Endoscope is a 5.5 mm endoscope designed exclusively for the VirtuoSaph EVH System utilizing Olympus technology. Olympus is recognized worldwide for its expertise in optics technology. This vital component provides superior resolution and image quality.

Dissector Rod

To dissect the saphenous vein and surrounding branches.

Trocar

This device is a simple clip-on trocar. The dissector or harvester rod accesses the saphenous vein by entering the non-occluding trocar through the port. The body of the trocar is inserted into the leg incision and stays in place with the clip securely placed on the skin allowing fast conversion between the procedural steps. It places little or no pressure on the vein at the incision site. Research has shown that clot formation can result if stagnant blood that is not anti-coagulated is allowed to remain within a collapsed saphenous vein.

1 The atraumatic conical tip of the dissector rod offers consistent and uniform dissection.

2 CO₂ delivered at the tip consistently provides space in the tunnel for increased visibility.

Use of open CO₂ insufflation can lead to dramatic reductions in retained clots.

Research has shown the frequent presence of intra-luminal clots in vessels harvested endoscopically using a “closed” EVH system. Two studies noted CO₂ embolisms are noted about 4% to 17% of the time when using “closed” systems.

Continuous monitoring is suggested to provide early detection and help prevent development of significant CO₂ embolisms.

3 Centering rings allow monitoring of the dissector cone tip during dissection.
Harvester Rod

To coagulate and cut the branches of the saphenous vein in one easy step.

4 The V-keeper holds down the saphenous vein to minimize potential damage to the vein during cauterization. It is designed to set up the proper branch tautness and work in concert with the V-cutter for optimal sealing and cutting.

5 The bilateral notches anchor the branch to provide optimal tension during transaction.

6 The V-lock mechanism secures the saphenous vein in place during harvesting and transaction of the branches. It ensures that all the branches are cauterized and cut prior to removing the harvester rod from the leg.

7 The V-cutter is a simple cut-and-coagulate mechanism employing targeted low energy. It provides both functions in one easy step.

8 \( \text{CO}_2 \) delivered at the tip consistently provides space in the tunnel for increased visibility. Use of open \( \text{CO}_2 \) insufflation can lead to dramatic reductions in retained clots. Research has shown the frequent presence of intra-luminal clots in vessels harvested endoscopically using a “closed” EVH system.\(^1\)\(^2\) Two studies noted \( \text{CO}_2 \) embolisms about 4% to 17% of the time when using “closed” systems.\(^3\)\(^4\) Continuous monitoring is suggested to provide early detection and help prevent development of significant \( \text{CO}_2 \) embolisms.\(^5\)

9 The unique wiper located on the harvester rod clears and cleans the endoscopic lens of fat or blood to improve procedural visibility with one wipe, without adding fluid in the cavity. The ergonomic placement of the wiper switch on the handle allows easy activation.

Endoscopic Tower

In the United States, Terumo provides all the hardware components necessary to perform endoscopic vein harvesting. The imaging components for the endoscopic tower include the Olympus VISERA™ camera processor unit (CPU), VISERA light source, monitor, and a cart.

Generator

The UES-40 generator from Olympus, combined with the VirtuSoPh System, provides the latest in electrosurgical technology and performance. The UES-40 generator delivers the flexibility needed to delicately adjust coagulation and cutting settings to meet clinicians’ procedural needs.
Unique Technology Worth a Closer Look

Ordering Information

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<tr>
<th>Disposable Products</th>
<th>Product Code</th>
<th>Units/CASE</th>
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<tr>
<td>VirtuoSaph Endoscopic Vein Harvesting System, sterile, (includes dissector, harvester and trocar)</td>
<td>MCVS550</td>
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<tr>
<td>Trocar, sterile (for spare)</td>
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<td>Generator*</td>
<td>UES-40</td>
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*Manufactured by Olympus Corporation, Tokyo, Japan. Available in the United States only.

For more information on tower components and generator compatibility, please contact your local Terumo sales representative or call Customer Service at (888) 758-8000.

www.terumo-cvs.com/virtuosaph

FOOTNOTES